

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):

Nicolai Kosche et al.

Title:

TECHNIQUE FOR ASSOCIATING INSTRUCTIONS WITH

EXECUTION EVENTS

Application No.: 10/050,358

Filed:

January 16, 2002

Examiner:

Wang, Rongfa Philip

Group Art Unit:

2192

Atty. Docket No.: 004-7047

Confirmation No.:

5734

February 7, 2006

Mail Stop Amendment COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT 37 C.F.R. § 1.97(c)

Dear Sir:

Pursuant to 37 C.F.R. § 1.56, § 1.97 and § 1.98, the undersigned brings to the Examiner's attention in the above-identified application the patents, publications, applications or other information identified in the attached:

| \bowtie | Form(s) PTO/SB/08A (1 page(s), with copy of no reference(s)). |
|-------------|--|
| \boxtimes | Form(s) PTO/SB/08B (2 page(s), with copy of 28 reference(s)). |
| | Listing of Pending Applications (N/A page(s), with copy of no application(s) |
| | Other: N/A |

Citation of such information shall not be construed as (i) an admission that the information necessarily is, or corresponds to, prior art with respect to the instant invention, (ii) a representation that a search has been made, other than as described herein, or (iii) an admission that the information cited herein is, or is considered to be, material to patentability as defined in § 1.56(b).

For each item of information listed that is not in the English language, the undersigned has provided a concise explanation of the relevance through (i) an English language abstract, (ii) an English language equivalent application, or (iii) if cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action that indicates the degree of relevance found by the foreign office.

02/13/2006 BABRAHA1 00000077 500631 10050358

01 FC:1806

180.00 DA

CERTAIN COPIES NOT INCLUDED

Pursuant to operative regulations, certain copies need not be provided and corresponding information is identified in this Information Disclosure Statement by citation only. In particular,

| | | · |
|--|---|--|
| \boxtimes | In accordance with 37 C.F.R. § 1.98 Patent Application Publications are | (a)(2)(ii), copies of cited U.S. Patents and U.S. not included. |
| | filed N/A, to which the above-identi | o, or cited by, the Office in Application No(s). N/A fied application claims priority under 35 U.S.C. § 1.98(d), copies of that information are not |
| | applications filed (or which entered | 19, 2004), for those cited pending U.S. patent the national stage under 35 U.S.C. § 371) on or erwise stored in the USPTO's Image File Wrapper |
| | FEE AUT | THORIZATION |
| he mai iii) an | ling date of (i) a final action under § 1 action that otherwise closes prosecution that is accompanied by the fee set forth. A check in the amount of \$0.00 is en | nclosed herewith. the Commissioner to charge the fee set forth in |
| hereby ce correspond deposit as first | rtify that, on the date shown below, this ence is being ted with the US Postal Service with sufficient postage class mail and addressed as shown above. ile transmitted to the US Patent and Trademark Office. Michael R. Long Date | Michael R. Long, Reg. No. 42,808 Attorney for Applicant(s) (512) 338-6324 (direct) (512) 338-6300 (main) (512) 338-6301 (fax) |
| EXPRESS | SMAIL LABEL: | |

| | PTO/SB/08A (Substitute for form 1449/PTO) | Attorney Docket No. | : 004-7047 |
|---|--|---------------------|--------------------|
| | | Application No.: | 10/050,358 |
| | PE INFORMATION DISCLOSURE STATEMENT BY APPLICANT | First Named Invento | r: Nicolai Kosche |
| ′ | ************************************** | Filing Date: | January 16, 2002 |
| 0 | EB 1 0 2006 | Group Art Unit: | 2192 |
| | | Examiner Name: | Rongfa Philip Wang |
| ` | SHOPP OF I | Date Submitted: | February 7, 2006 |

| | | | U.S. PATENT DO | CUMENTS | | |
|-----------------------|--------------------------|--|--------------------------------|--|---|----------------|
| Examiner Initials* | Cite No.1 | Document Number Number-Kind Code ² (if known) | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Wh Relevant Passages or Relev Figures Appear | |
| | AA | US-5,526,499 | 06-11-1996 | Bernstein et al. | | |
| | AB | US-5,948,095 | 09-97-1999 | Arora et al. | | |
| | AC | US-6,000,044 | 12-07-1999 | Chrysos et al. | | |
| | AD | US-6,092,180 | 07-18-2000 | Anderson et al. | | |
| • | AE | US-6,098,166 | 08-01-2000 | Liebholz et al. | | |
| | AF | US-6,289,506 | 09-01-2001 | Kwong et al. | · . | |
| | AG | US-6,308,261 | 10-23-2001 | Morris et al. | 1 | |
| | AH | US-6,625,660 | 09-23-2003 | Guthrie et al. | | |
| . | AI | US-6,675,374 | 01-06-2004 | Pieper et al. | | |
| | AJ | US-6,675,380 | 01-06-2004 | McKinsey et al. | | |
| | AK | US-6,681,317 | 01-20-2004 | Matthews | | |
| | AL | US-6,697,932 | 02-24-2004 | Yoaz et al. | | |
| | AM | US-6,748,589 | 06-08-2004 | Johnson et al. | | |
| | AN | US-6,880,073 | 04-12-2005 | Arimilli et al. | - 3 | |
| V | AO | US-2002/0056078 | 05-09-2002 | Inagaki | | |
| | | <u> </u> | FOREIGN PATENT | DOCUMENTS | | |
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document Country Code ³ -Number ⁴ - Kind Code ⁵ (if known) | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ⁶ |
| - | | | | | | |
| Examiner Sig | nature | | <u></u> | Date Considered | | |

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional).

²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04.

³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3)

For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Skind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible.

⁶Applicant is to place a check mark here if English language Translation is attached.

| PTO/SB/08B (Substitute for form 1449/PTO) | Attorney Docket No.: | 004-7047 |
|---|----------------------|--------------------|
| 9.5 | Application No.: | 10/050,358 |
| 40 NFORMATION DISCLOSURE STATEMENT BY APPLICANT | First Named Inventor | : Nicolai Kosche |
| B 102006 m | Filing Date: | January 16, 2002 |
| | Group Art Unit: | 2192 |
| TRADEMARKS. | Examiner Name: | Rongfa Philip Wang |
| Sheet 1 of 2 | Date Submitted: | February 7, 2006 |
| NON PATENT LITERATURE DOC | UMENTS | |

Examiner Cite Include name of author (in CAPITAL LETTERS), title of article (when appropriate), title of the item No.1 Initials* (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. ALPERN, B. et al., "The Jalapeno Virtual Machine," IBM Systems Journal, Vol. 39, No. 1, 2000, pages 211-238. AA ANDERSON, Jennifer et al., "Continuous Profiling (It's 10:43; Do You Know Where Your Cycles Are?)," abstract AB for presentation at HOT Chips 9, Stanford, CA, August 1997, 2 pages, retrieved from the Internet at URL http://h30097.www3.hp.com/dcpi/publications.htm. ANDERSON, Jennifer et al., "Instruction-Level Profiling on In-Order and Out-of-Order Processors," DEC AC presentation by Jeff Dean at Duke University, December 3, 1997, 42 pages, retrieved from the Internet at URL http://h30097.www3.hp.com/dcpi/publications.htm. ANDERSON, Jennifer M. et al., "Continuous Profiling: Where Have All the Cycles Gone?" 16th ACM Symposium AD on Operating Systems Principles, St. Malo, France, October 5-8, 1997, 20 pages. ANDERSON, Jennifer et al., "Continuous Profiling: An Electron Microscope for Your Computer," presentation by ΑE Mark Vandevoorde to Silicon Valley summer interns, Palo Alto, CA, August 13, 1999, 18 pages, ARMSTRONG, Eric, "HotSpot: A new breed of virtual machine," Java World, March 1998, 11 pages, retrieved AF from the Internet at URL http://www.javaworld.com. BERRENDORF, Rudolf and ZIEGLER, Heinz, "PCL - The Performance Counter Library: A Common Interface to AG Access Hardware Performance Counters on Microprocessors (Version 1.2)," Technical Report FZJ-ZAM-IB-9816, Julich, Germany, October 1998, pages 1-50. BERC, Lance et al., "DIGITAL Continuous Profiling Infrastructure," DIGITAL Continuous Profiling Infrastructure AΗ Project, OSDI '96 Work-in-Progress Presentation, 2 pages, retrieved from the Internet at URL http://h30097.www3.hp.com/dcpi/publications.htm. BERC, Lance and VANDEVOORDE, Mark, "Hardware Support for Out-of-Order Instruction Profiling on Alpha ΑI 21264a," HotChips 11, Stanford, CA, USA, August 17, 1999, 21 pages. BROWNE, Shirley et al., "A Scalable Cross-Platform Infrastructure for Application Performance Tuning Using" ΑJ Hardware Counters," Proceedings of SC2000, Dallas, TX, November 2000, 10 pages. BURROWS, Mike et al., "Efficient and Flexible Value Sampling," Architectural Support for Programming ΑK Languages and Operating Systems (ASPLOS-IX), Nov. 1--3 2000, pages 1-19. CHILIMBI, Trishul M. et al., "Cache-Conscious Structure Layout," Proceedings of the ACM SIGPLAN '99 Conf. AL on Programming Language Design and Implementation, May 1999, 12 pages. CHILIMBI, Trishul J., et al., "Cache-Conscious Structure Definition," Proceedings of the ACM SIGPLAN '99 Conf. AM on Programming Language Design and Implementation, May 1999, 12 pages. DEAN, Jeffrey et al., "ProfileMe: Hardware Support for Instruction-Level Profiling on Out-of-Order Processors," AN 1997 IEEE in Proceedings of Micro-30, Research Triangle Park, NC, December 1-3, 1997, 12 pages. DEROSE, Luiz et al., "SIGMA: A Simulator Infrastructure to Guide Memory Analysis," Conf. on High AO Performance Networking and Computing Proceedings of the 2002 ACM/IEEE Conf. on Supercomputing, Baltimore, MD, 2002, 13 pages. ITZKOWITZ, Marty et al., "Memory Profiling Using Hardware Counters," in Conf. on High Performance AP Networking and Computing Proceedings of the 2003 ACM/IEEE Conf. on Supercomputing, Phoenix, AZ, November 15-21, 2003, pages 1-12. Examiner Signature **Date Considered**

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional).

²Applicant is to place a check mark here if English language Translation is attached.

| | PTO/SB/08B (Substitute for form 1449/PTO) | Attorney Docket No.: | 004-7047 |
|---|--|-----------------------|--------------------|
| | | Application No.: | 10/050,358 |
| / | PE INFORMATION DISCLOSURE STATEMENT BY APPLICANT | First Named Inventor: | Nicolai Kosche |
| | (Continuation Sheet) | Filing Date: | January 16, 2002 |
| • | LED | Group Art Unit: | 2192 |
| 1 | THADEWARE | Examiner Name: | Rongfa Philip Wang |
| | Sheer 2 of 2 | Date Submitted: | February 7, 2006 |

NON PATENT LITERATURE DOCUMENTS

| | | NON PATENT LITERATURE DOCUMENTS | | | | |
|-----------------------|--------------|---|-------------|--|--|--|
| Examiner Initials* | Cite No.1 | | | | | |
| | AQ | LEBECK, Alvin R., "Cache Conscious Programming in Undergraduate Computer Science," ACM SIGCSE Technical Symposium on Computer Science Education (SIGCSE '99), Proceedings of the 30th SIGSCE Tech Symposium on Comp. Sci. Edu., New Orleans, LA, USA, March 24-28, 1999, 5 pages. | - | | | |
| | AR | LIPASTI, Mikko H. et al., "SPAID: Software Prefetching in Pointer- and Call-Intensive Environments," <i>Micro 28 Proceedings of the 28th Annual International Symposium on Microarchitecture</i> , Nov. 29-Dec. 1, 1995, Ann Arbor, MI, 6 pages. | | | | |
| | AS | LUK, Chi-Keung and MOWRY, Todd, "Compiler-Based Prefetching for Recursive Data Structures," APLOS-VII, Proceedings of the Seventh International Conf. on Architectural Support for Programming Languages and Operating Systems, Cambridge, MA, Oct. 1-5, 1996, 12 pages. | • | | | |
| | АТ | MARTONOSI, Margaret et al., "MemSpy: Analyzing Memory System Bottlenecks in Programs," <i>Proceedings of the1992 ACM SIGMETRICS Joint Int'l. Conf. on Measurement and Modeling of Computer Systems</i> , Newport, RI, USA, June 1-5, 1992, pages 1-12. | - | | | |
| | AU | MOWRY, Todd C. et al., "Design and Evaluation of a Compiler Algorithm for Prefetching," ASPLOS-V, Proceedings of the Fifth International Conf. on Architectural Support for Programming Languages and Operating Systems, Boston, MA, USA, Oct. 12-15, 1992, pages 62-73. | | | | |
| | AV | RUBIN, Shai et al., "An Efficient Profile-Analysis Framework for Data-Layout Optimizations," <i>Proceedings of the 29th ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages</i> , Portland, OR USA, Jan. 16-18, 2002, 14 pages. | | | | |
| • | AW | SPRUNT, Brinkley, "The Performance Monitoring Features of the Pentium 4 Processor," <i>IEEE Micro</i> , Vol. 22, No. 4, July 2002, pages 32-42. | | | | |
| | AX | SRIDHARAN, K., "VTune: Intel's Visual Tuning Environment," Proceedings of USENIX-NT Windows NT Workshop, August 11, 1997, Seattle, CA, USA, retrieved from the Internet at URL http://www.usenix.org/publications/library/proceedings/usenix-nt97/presentations/sridhar.html, 24 pages. | | | | |
| | AY | "Program Performance Analysis Tools," Sun Microsystems, Inc. Publication 817-0922-10, May 2003, retrieved from the Internet at URL http://docs.sun.com/source/817-0922/, 244 pages. | | | | |
| | AZ | VENNERS, Bill, "The HotSpot Virtual Machine, How HotSpot Can Improve Java Program Performance and Designs," <i>Artima Developer</i> , May 1998, 7 pages, retrieved from the Internet at URL http:///www.artima.com. | | | | |
| | BA | WALKER, Kip et al., "Using Interpretation for Profiling the Alpha 21264a," presented at Carnegie Mellon University, October 1999, 29 pages. | | | | |
| | BB | "The Java HotSpot Performance Engine Architecture," Digital Forefront Magazine, Winter 1997, pages 27-28, retrieved from the Internet at URL http://java.sun.com/products/whitepaper.html. | | | | |
| | | | | | | |
| | | | | | | |
| Examiner Sig | nature | Date Considered | | | | |